

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Krishna Kishore Yellepeddy, Lok Yan Leung, Anthony Joseph Nadalin

Assignee: International Business Machines Corporation

Title: Dynamic PKI Architecture

Serial No.: 09/738,247 Filing Date: December 15, 2000

Examiner: Carl G. Colin Group Art Unit: 2136

Docket No.: AUS920000947US1 Customer No. 65362

---

Austin, Texas  
August 15, 2008

FILED ELECTRONICALLY

**SECOND SUPPLEMENTAL APPEAL BRIEF SUBMISSION UNDER MPEP § 1205.03**

Dear Sir:

In response to the Notification of Non-Compliant Appeal Brief dated July 15, 2008, Applicants file this Second Supplemental Appeal Brief Submission pursuant to MPEP § 1205.03 for purposes of listing each independent claim and mapping out each limitation with the corresponding page and line number in the specification. No fee is believed to be due for this filing; however, the Board is authorized to deduct any amounts required for resubmission of this appeal brief and to credit any amounts overpaid to Deposit Account. No. 09-0447.

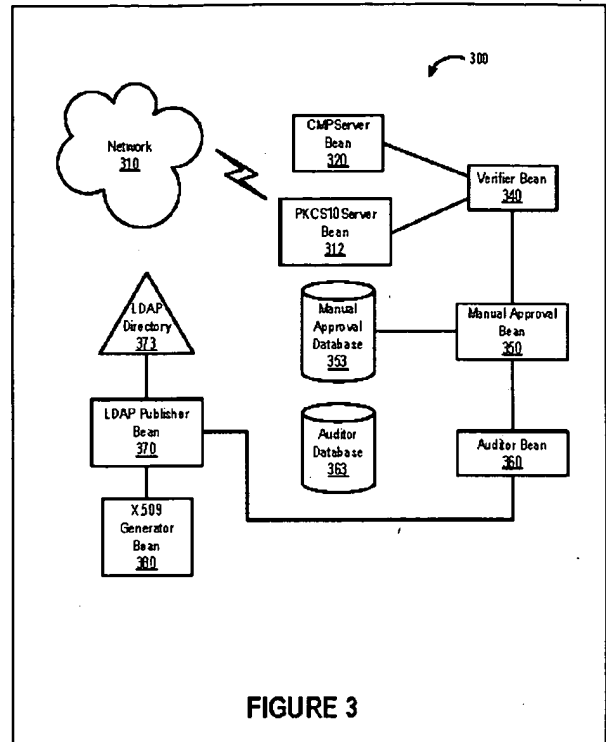
As a preliminary matter, Applicants respectfully submit that the original Appeal Brief fully meets the requirements of 37 C.F.R. § 41.37(c)(1)(v), and that there is no requirement in the patent rules that the map each limitation with its corresponding page and line number. To the contrary, all that is required by 37 C.F.R. § 41.37(c)(1)(v) is a "concise explanation of the subject matter defined in each of the independent claims involved in the appeal, which shall refer to the specification by page and line number, and to the drawing, if any, by reference characters." In addition, Applicants submit that the Examiner referred to only part of the cited description (page 5, line 1 to page 6, line 11) when objecting to the mapping for claim 1, when in fact Applicants provided an extensive mapping of claim 1 at pages 3 and 4 of the Supplemental Appeal Brief Submission. However, at the risk of belaboring what has already been stated, and solely for purposes of expediting consideration of the appeal, Applicants have included a claim

chart mapping exhibit at Appendix C-1 to map out each limitation of the independent claims to the drawings and specification by page and line number.

**V. SUMMARY OF CLAIMED SUBJECT MATTER - 37 CFR § 41.37(c)(1)(v)**

The claims of the present patent application are directed to a particular software architecture composed of functional building blocks of software or “beans” that respond to propagated events for implementing functionality related to digital certificates. Each of the independent claims 1, 13, 24, 35, and 44 introduces a requirement of at least one bean. The beans are linked together through propagating events. In one embodiment they are written in a real-time object oriented code, such as Java which provides an environment that allows for the immediate implementation of the beans across a wide variety of computing systems to operate in a system independent manner.

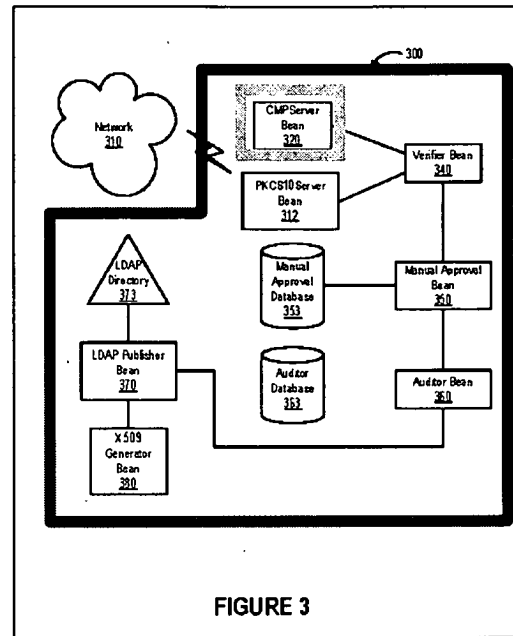
The subject matter defined in independent claim 1 may be understood with reference to the example embodiments depicted in Replacement Figure 3 which depicts how the beans of the invention may be used in a distributed processing system to implement a request regarding a digital certificate (e.g., a PKI request for a certificate authority). As described and depicted, the PKI system 300 includes software written in real time executable object-oriented language, such as Java, and one or more beans. *See*, Application, page 5, line 1 to page 6, line 11 (“Summary of the Invention”). When a request regarding the digital certificate is received (e.g., from the network 310), request implementation software (e.g., Java code) in the PKI system 300 implements a response thereto using at least one reception bean (e.g., the Certificate Management Protocol (CMP) server bean 320). As shown and described by Applicants, each of the beans is communicatively coupled to the request implementation software and the distributed processing system. In response, the reception bean (e.g., 320) generates an event object, such as by formatting the request for further processing by the PKI system 300. *See*, Application, p. 17, lines 15-22 (“FIG. 3 is a functional block diagram of how the beans of the invention may be implemented in the handling of a PKI request for a certificate authority. A request reaches the



PKI system 300 through a connection to a network 310. A Certificate Management Protocol (CMP) server bean 320 receives a CMP request from the network 310. The CMP formatter bean formats the CMP request into a specific request to be sent to the remainder of the system 300.”)

To comply with 37 CFR § 41.37(c)(1)(v), a color-coded comparison of independent claim 1 (with reference numerals) and Figure 3 is set forth below:

1. An apparatus for implementing a request regarding a digital certificate in a distributed processing system, the apparatus comprising:
  - a request implementation software (300) that implements a response to the request regarding the digital certificate in response to a propagated event object;
  - at least one reception bean (e.g., 320), communicatively coupled to the request implementation software and the distributed processing system, that generates an event object in response to receiving the request to generate a digital certificate from the distributed processing system; and
  - the request implementation software instantiated in a real time executable object-oriented language.



In further compliance with 37 CFR § 41.37(c)(1)(v), a color-coded comparison of selected Figures from the application and each of the pending independent claims is attached at Appendix “C” to provide a concise explanation of the subject matter defined in each independent claim. As will be appreciated, the color-coded comparison is provided to summarize the claimed subject matter by explaining how the claim language reads onto or overlaps with the exemplary disclosure from the application and drawings, and is not being provided to specifically define or limit the claim terminology to the specific example depicted. The subject matter of the independent claims is set forth in the claims (page 34, line 1 to page 40, line 31), as well as in the specification at page 5, line 1 to page 6, line 11; page 7, line 6 to page 8, line 11; page 9, lines 7-13; page 10, lines 15-24; and page 14, line 24 to page 33, line 17, though additional contextual description is provided in the application. For example, the subject matter of claim 1 maps to Figure 3 and to the specification at page 17, line 15 to page 22, line 3; the subject matter of claim

13 maps to Figure 3 and to the specification at page 17, line 15 to page 22, line 3; the subject matter of claim 24 maps to Figure 3 and to the specification at page 17, line 15 to page 22, line 3 and page 33, lines 1-10; the subject matter of claim 35 maps to Figure 3 and to the specification at page 17, line 15 to page 22, line 3; and the subject matter of claim 44 maps to Figure 3 and to the specification at page 17, line 15 to page 22, line 3 and at page 28, line 15 to page 32, line 26.

In still *further* compliance with 37 CFR § 41.37(c)(1)(v), Applicants have attached a claim chart mapping at Appendix C-1 to map out each limitation of the independent claims to the drawings and specification by page and line number. In the column labeled "Corresponding Description by Page and Line Number (P:N)," the page and line are indicated with the P:N convention so that page 1, lines 1-3 is indicated as "1:1-3," and so that page 10, line 1 to page 11, line 3 is indicated as "10:1-11:3."

While Applicants have identified passages from the specification to explain the independent claim subject matter and how it may be implemented with a computer program product in a data processing system, it will be appreciated that the referenced description includes contextual information to provide an overall context for an example embodiments, and therefore should not be used to improperly read limitations from the specification into the claims.

#### **XI. CONCLUSION**

In view of the above second supplemental description providing a summary of the claimed subject matter, Applicants request that the Notification of Non-Compliant Appeal Brief be withdrawn and that the pending rejections of the claims should not be sustained.

##### **CERTIFICATE OF TRANSMISSION**

I hereby certify that on August 15, 2008 this correspondence is being transmitted via the U.S. Patent & Trademark Office's electronic filing system.

*/Michael Rocco Cannatti/*

Respectfully submitted,

*/Michael Rocco Cannatti/*

Michael Rocco Cannatti  
Attorney for Applicant(s)  
Reg. No. 34,791

1. An apparatus for implementing a request regarding a digital certificate in a distributed processing system, the apparatus comprising:

a request implementation software (300) that implements a response to the request regarding the digital certificate in response to a propagated event object;

at least one reception bean (e.g., 320), communicatively coupled to the request implementation software and the distributed processing system, that generates an event object in response to receiving the request to generate a digital certificate from the distributed processing system; and

the request implementation software instantiated in a real time executable object-oriented language.

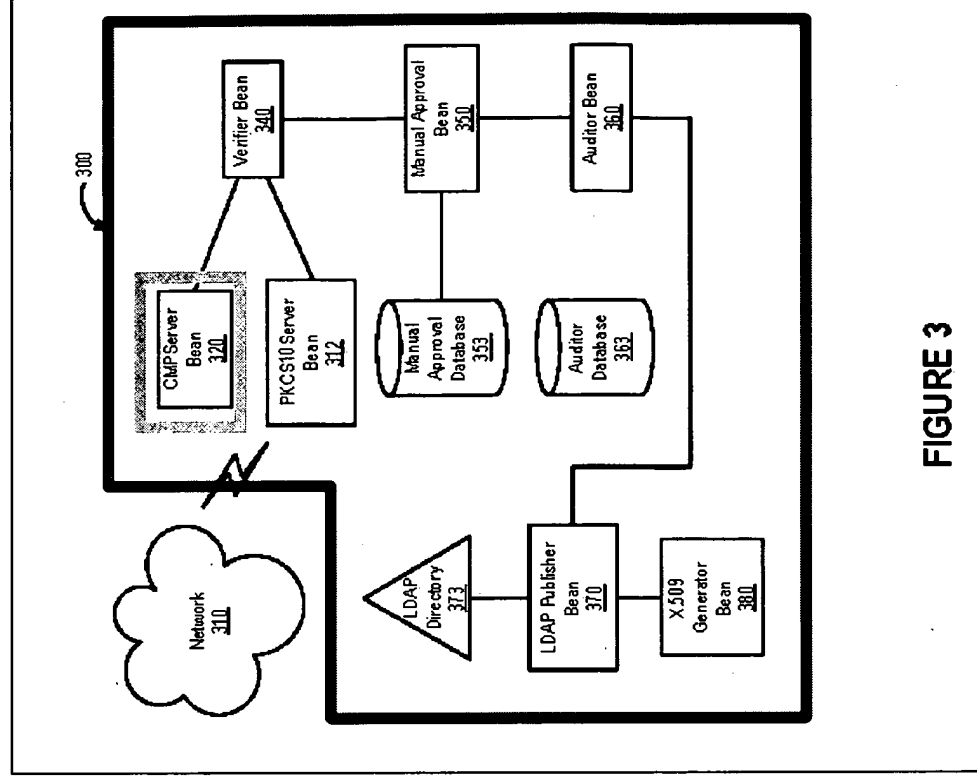


FIGURE 3

13. A method for implementing a request regarding a digital certificate in a distributed processing system, the method comprising:

- receiving the request to generate the digital certificate from the distributed processing system in an at least one reception bean;
- generating a reception event object in response to step of receiving;
- propagating the reception event object; selectively implementing a response to the request regarding the digital certificate in response to a propagated event object in a request implementation software;
- the request implementation software instantiated in a real time executable object-oriented language.

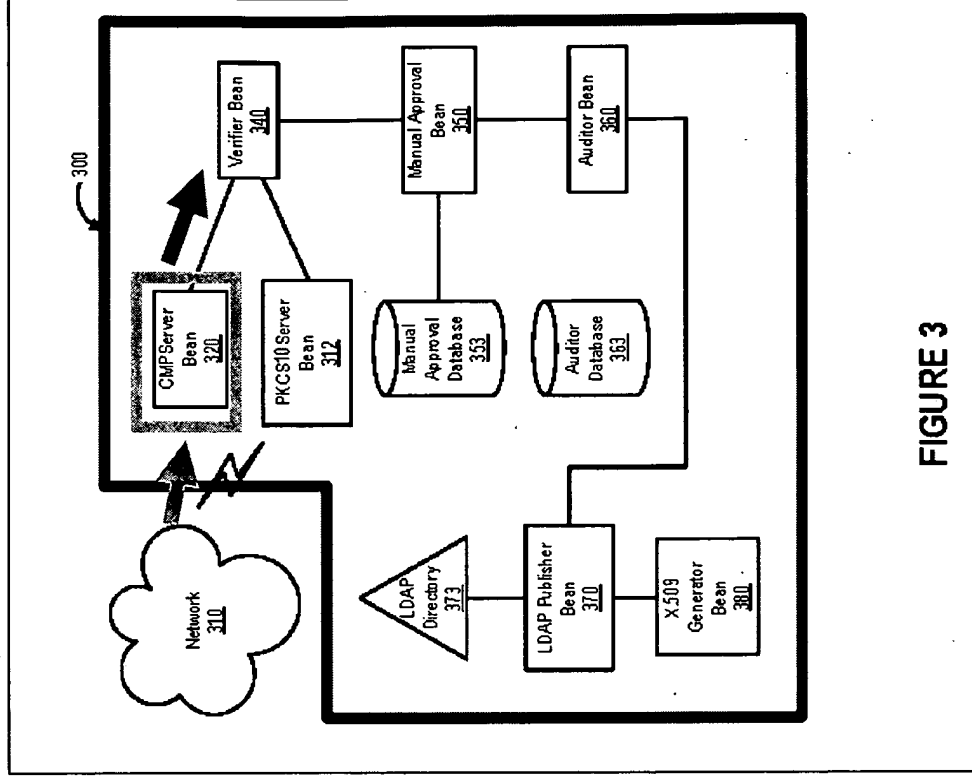


FIGURE 3

24. A computer program product on a computer usable medium, the computer usable medium having a computer usable program embodied therein for implementing a request regarding a digital certificate on a distributed data processing system, the computer usable program including:

- instructions for receiving the request to regarding the digital certificate from the distributed processing system, the instructions for receiving instantiated in an at least one reception bean;
- instructions for generating a reception event object in response to the instructions for receiving;
- instructions for propagating the reception event object;
- instructions for selectively implementing a response to the request regarding the digital certificate in response to a propagated event object, the instructions for selectively implementing instantiated in a request implementation software; and
- the instructions for receiving the request instantiated in a real time executable object-oriented language.

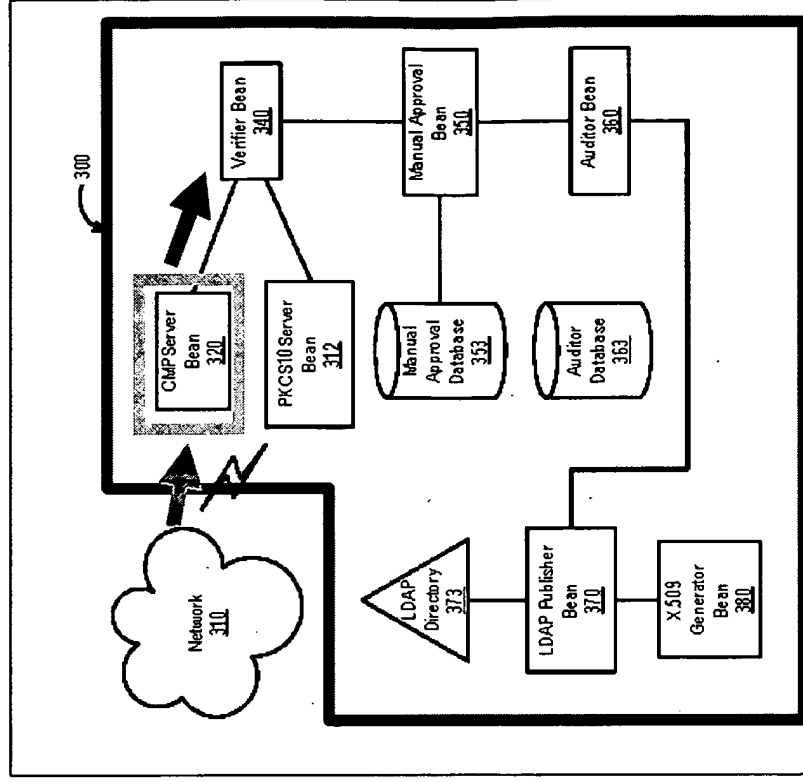


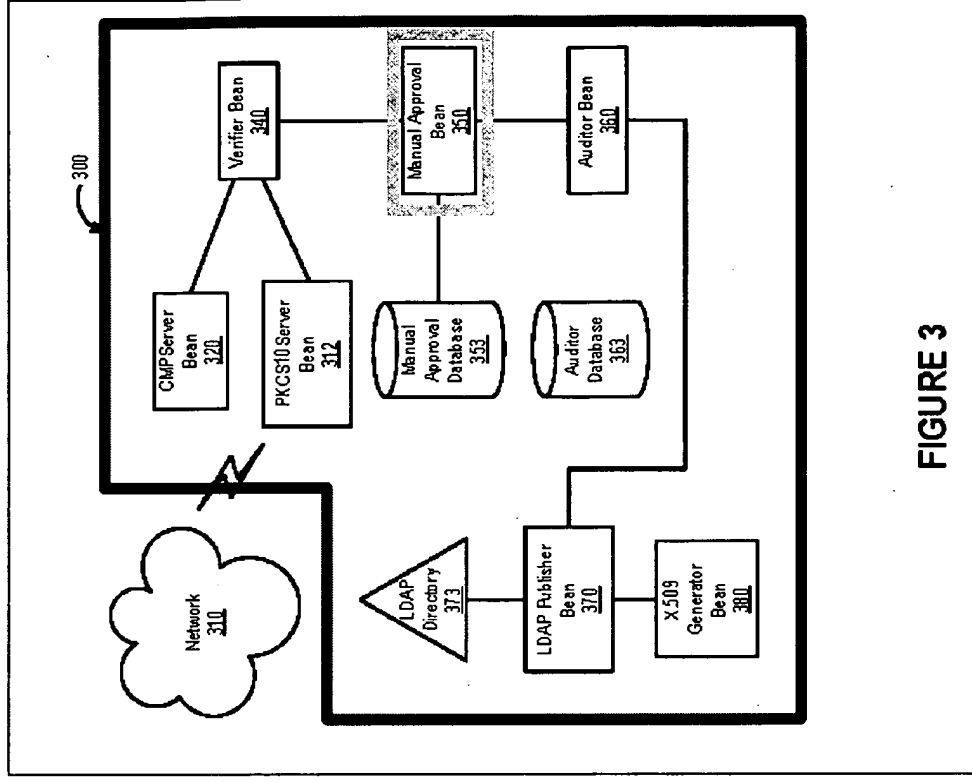
FIGURE 3



**35. An apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising:**

**a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans; and**

**at least one of the plurality of beans comprising a pipe bean that propagates an event to another of the plurality of beans.**



**FIGURE 3**

44. An apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising:  
a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans;  
the respective events generated by the plurality of beans subclassing from a base class event.

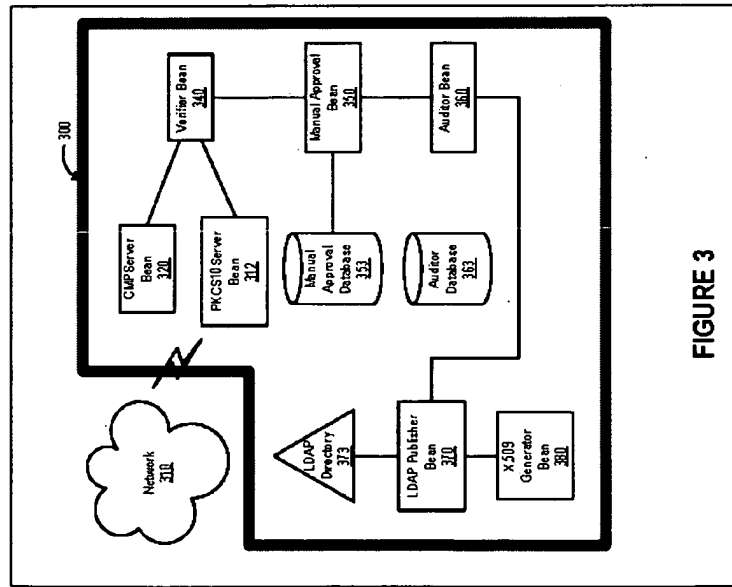


FIGURE 3

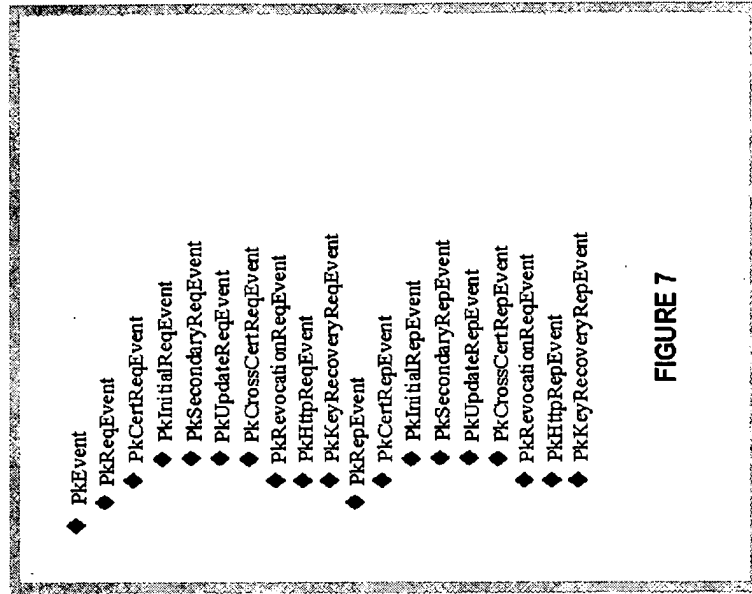


FIGURE 7

## APPENDIX C

Independent Claims	Corresponding Description by Page and Line Number (P:N)
1. An apparatus for implementing a request regarding a digital certificate in a distributed processing system, the apparatus comprising:	Fig. 3, 5:1-6:11, 9:1-13, 10:15-24, 17:15-20
a request implementation software that implements a response to the request regarding the digital certificate in response to a propagated event object;	9:1-13, 17:15-22:3
at least one reception bean, communicatively coupled to the request implementation software and the distributed processing system, that generates an event object in response to receiving the request to generate a digital certificate from the distributed processing system; and	17:15-27, 21:26-22:3
the request implementation software instantiated in a real time executable object-oriented language.	5:1-6:11, 9:7-13
13. A method for implementing a request regarding a digital certificate in a distributed processing system, the method comprising:	Fig. 3, 5:1-6:11, 9:1-13, 10:15-24, 17:15-20
receiving the request to generate the digital certificate from the distributed processing system in an at least one reception bean;	9:1-13, 10:15-24, 17:15-27,
generating a reception event object in response to step of receiving; propagating the reception event object;	9:1-13, 17:15-22:3, 21:26-22:3
selectively implementing a response to the request regarding the digital certificate in response to a propagated event object in a request implementation software;	17:15-22:3
the request implementation software instantiated in a real time executable object-oriented language.	5:1-6:11, 9:7-13
24. A computer program product on a computer usable medium, the computer usable medium having a computer usable program embodied therein for implementing a request regarding a digital certificate on a distributed data processing system, the computer usable program including:	Fig. 3, 5:1-6:11, 9:1-13, 10:15-24, 17:15-20, 33:1-10
instructions for receiving the request to regarding the digital certificate from the distributed processing system, the instructions for receiving instantiated in an at least one reception bean;	9:1-13, 10:15-24, 17:15-27,
instructions for generating a reception event object in response to the instructions for receiving; instructions for propagating the reception event object;	9:1-13, 17:15-22:3, 21:26-22:3
instructions for selectively implementing a response to the request regarding the digital certificate in response to a propagated event object, the instructions for selectively implementing instantiated in a request implementation software; and	17:15-22:3
the instructions for receiving the request instantiated in a real	5:1-6:11, 9:7-13

Independent Claims	Corresponding Description by Page and Line Number (P:N)
time executable object-oriented language.	
35. An apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising:	Fig. 3, 5:1-6:11, 9:1-13, 10:15-24, 17:15-20
a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans; and	5:1-6:11, 17:15-22:3
at least one of the plurality of beans comprising a pipe bean that propagates an event to another of the plurality of beans.	20:1-9, 21:26-22:3
44. An apparatus for implementing a public key infrastructure in a distributed processing system, the apparatus comprising:	Figs. 3 and 7, 5:1-6:11, 9:1-13, 10:15-24, 17:15-20
a plurality of beans, the beans communicatively coupled to one another and responsive to events generated by the plurality of beans; and	5:1-6:11, 17:15-22:3
the respective events generated by the plurality of beans subclassing from a base class event.	28:15-32:26